الجمهورية العربية السورية

اللاذقية جامعة تشرين

كلية الهندسة الميكانيكية والكهربائية

قسم هندسة الاتصالات والالكترونيات

السنة الخامسة:وظيفة ١ برمجة شبكات

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Question 1:python basics?

A-define a list that contain the names of gratuded students "5students at least":

create a programme that accept student name and prints if the user is graduated or not.

```
g=['lana ray','zayn malik','selena gomes','justin temp','taylor swift']
u=input('entre your first and last name')
if u in g:
   print(u)
```

-we created alist of five names ,gived the user the choice to enter a name using input,we tested acondition using if. **Taylor swift** is graduated.

```
entre your first and last nametaylor swift
taylor swift

Process finished with exit code 0
```

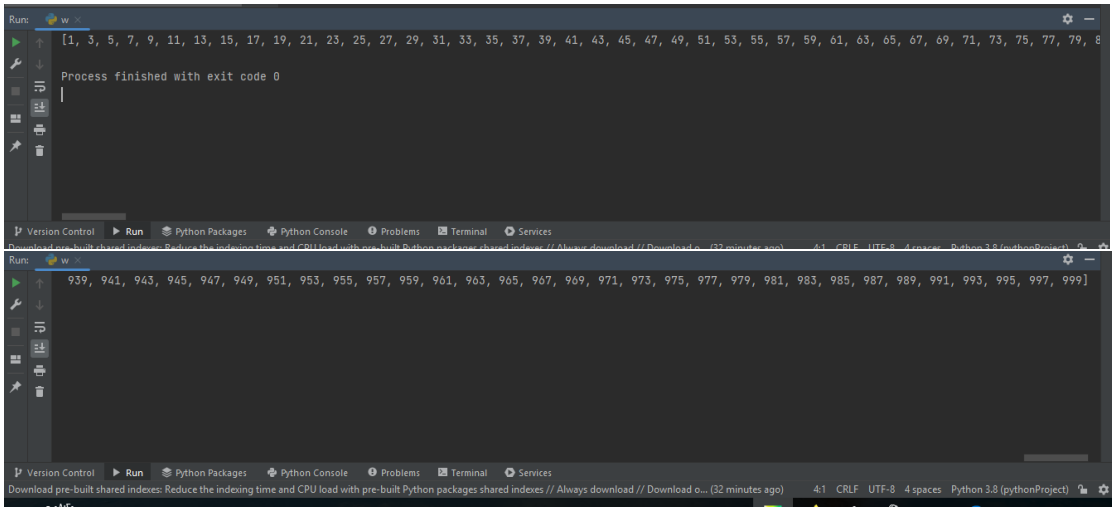
B-Generate and print a list of odd numbers from 1 to 1000.

Tips:'list comprehension '.

```
l=[x for x in range(1001) if x%2!=0]
print(l)
```

-we used the list comprehension phrase in python to generate alist ,saved it to the iterable l,tested the condition with if to make sure to get the odd numbers.

Output:



c-l=['network','math','programming','physics','music']

in this exercise,you will implement apython programme that reads the items of the previous list and identifies the items that starts with 'p' letter ,then print it on screen.

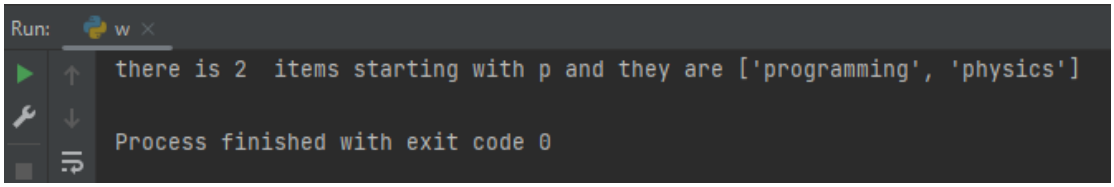
Tips:using loop,list len() method.

```
l=['network','math','programming','physics','music']
f=[]
for i in l:
    if i[0]=='p':
        f.append(i)
print('there is',len(f),' items starting with p and they are',f)
```

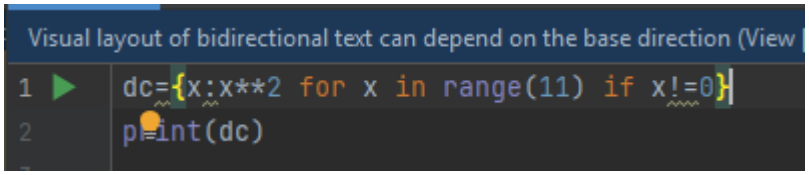
-we defined alist with strings in it ,then we defined an empty list,used the for loop to check every item in the list,tested the condition of starting with a p,added every

P item to the empty list using append,printed the number of p items with len ().

Output:

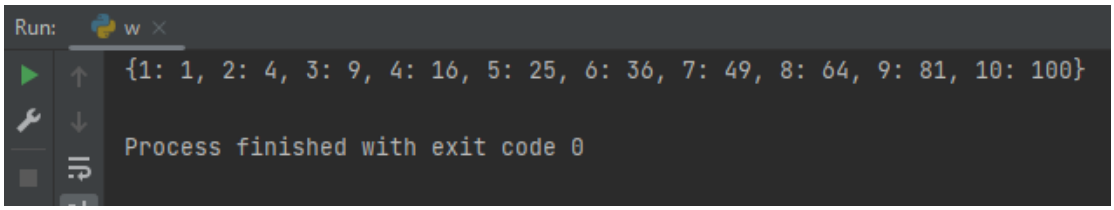


-D-using dictionary comprehension ,generate this dictionary d={1:1,2:4,3:9,4:16,5:25,6:36,7:49,8:64,9:81,10:100}.



-we used the dictionary comprehension phrase to generate adictionary that contains keys of numbers from 1 to 10 and values of these number doubles, saved it to th eiterable dc.

Output:



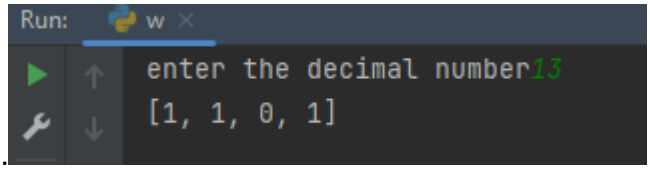
-Question 2:convert from decimal to binary.

Write apython program that converts adecmal number into its equivalent binary number. The program should start reading the decimal number from the user .then the binary equivalent number must be calculated.finally the program must display the equivalent number on the screen .

Tips:use empty list to hold binary number ,use%operator,//operator,list append method,reverse the list.

```
Visual layout of bidirectional text can depend on the base direction (View | Bidi Te
1  f=int(input('enter the decimal number'))
2  l=[]
3  while f!=0:
4      x=f%2
5      l.append(x)
6      f=f//2
7  l.reverse()
8  print(l)
9
```

-we let the user enter his decimal number using input,defined an empty list,used while loop to repeat the dividing operations over and over ,because decimal number is converted to binary after dividing the number over 2 over and over ,%to calculate the remainder and add it to the emoty list using append ,reversed the list using reverse () so we get binary number in its right order.we printed the binary number as alist .

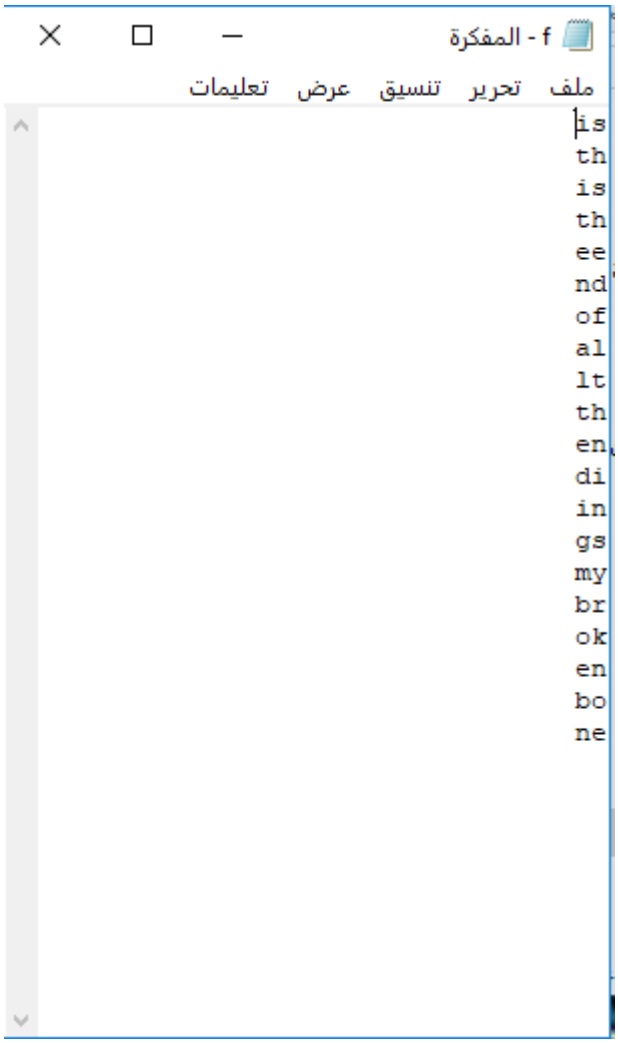


Question3:working with files "quiz program"

Type python quiz program that takes a text or json or csv file as input for(20(questions ,answers)).it takes the questions and finally computes and prints user results and store user name and result in separate file .

```
q="E://f.txt"
user=input('enter your name')
file=open(q, 'r')
s=file.read()
l=s.splitlines()
i=0
x=0
for x in range(20):
    w=input(l[x][0])
    if w==l[x][1]:
        i+=1
print(user,i)
d=open("E://e.txt",'w')
a=[user,str(i)]
d.writelines(a)
d.close()
```

File f with the questions and answers:

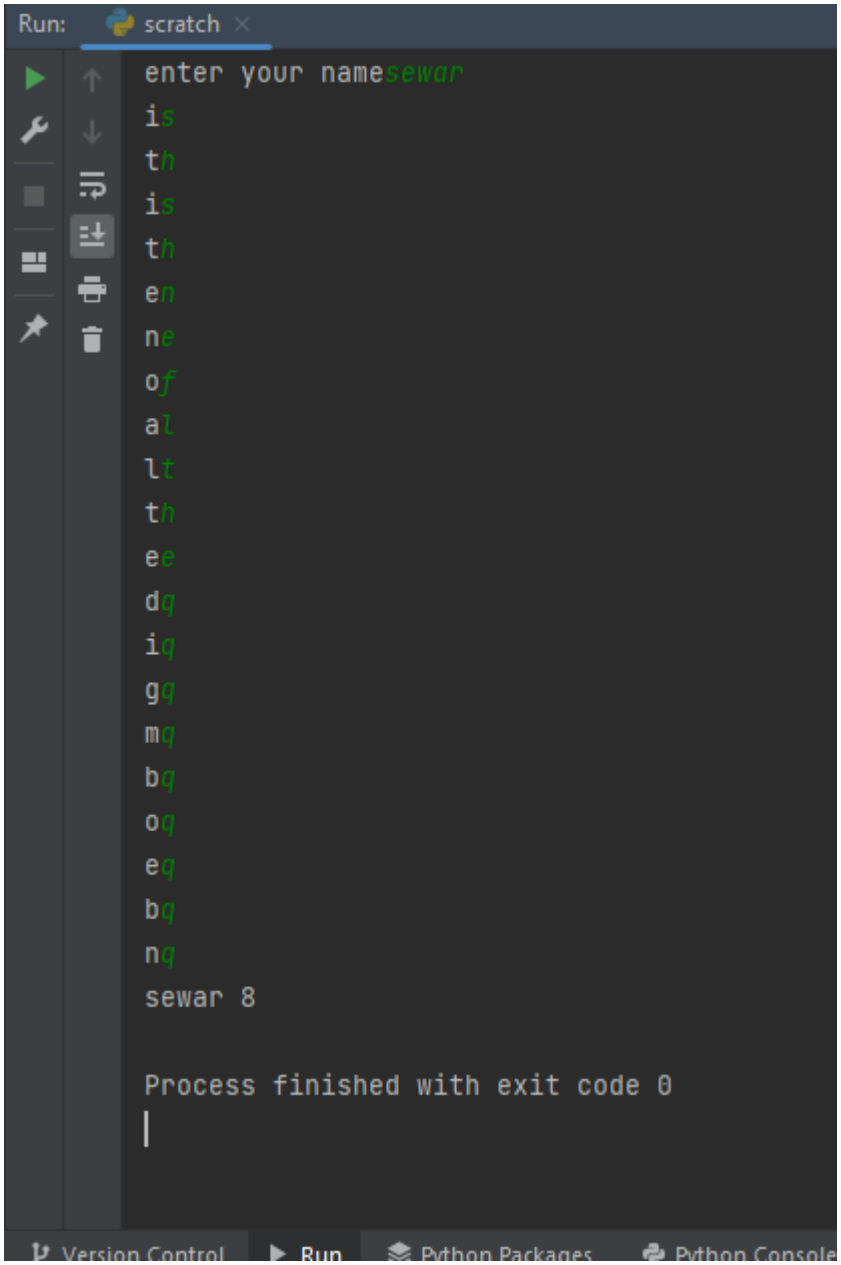


In this file we consider each first letter of the line as aquestion and each second letter of the same line as the answer.

-we imported the text file by writing its path ,opened it to read ,used splitlines to split each line of the text into alist item,defined i to count the right answers,x to go

through the indexes of the list and used for loop for that ,at every index or every line we showed aquestion, and let the user enter an answer and stored it in w ,used if to

test the condition of w equaling the right answer ,opend another text file and used writelines to write name and result in it .



File e with user name and result: